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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,373	07/09/2003	Michel Arseneau	A-8632	1385

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EXAMINER

TRIEU, THAI BA

ART UNIT PAPER NUMBER

3748

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,373

Applicant(s)

ARSENEAU, MICHEL

Examiner

Thai-Ba Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004 and 16 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5, 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Amendment filed on September 29, 2004, and November 16, 2004. Applicant's cooperation in correcting the informalities in the specification is appreciated. In the Amendment filed on September 29, 2004, Claims 1-5, and 9-12 were amended, claim 6 was cancelled, and claim 13 was added. The Amendment filed on November 16, 2004, was a response to a notice of non-compliance amendment issued on October 4, 2004.

Drawings

The objection to the drawings filed on July 09, 2003, which was indicated in the Office Action Summary issued on March 12, 2004, has been withdrawn, because the examiner accidentally clicked on the wrong box.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 1 recites the limitation **"said piston faces"** in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Auriol (Patent Number 592,073).

Auriol discloses an internal combustion engine comprising:

a body , said body having an inner surface, an outer surface, and an axis

(See Figure 2);

a shaft (via line X to Y) rotatably mounted within said body (See Figures 1-2);

a pair of pistons (P, P') within said body, said pair of pistons (P, P') attached to and extending from the shaft (See Figure 1);

a pair of cylinders (Not Numbered) (See Figure 1);

said pair of pistons (P,P') reciprocating within said pair of cylinders (See Figure 1);

a pin (Not Numbered, a portion through out of P, P') from each cylinder;

a bracket (Not Numbered) extending radially outwardly from each piston and engaging said pin (See Figure 1);

a compression spring (M) surrounding said pin and bearing against said bracket (See Figure1);

a combustion chamber formed in said shaft (See Figure 9 and 10);

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wherein said body has a centerline (Not Numbered) ; and said shaft (via line X to Y) extending along said body centerline (Not Numbered) (See Figure 1);

a second combustion chamber (Not Numbered) formed between said pair of cylinder (See Figure 1);

an ellipsoid guide (E) in said body (See Figures 2, 5, 6, and 11);

said pair of pistons (P,P') retained in said ellipsoid guide (E) (See Figures 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salvatore et al. (Patent Number GB 2 020 739 A), in view of Wolters et al. (Patent Number 5,878,712).

Salvatore discloses an internal combustion engine comprising:

a body (1), said body having an inner surface, an outer surface, and an axis (See Figure 2);

a shaft (9) rotatably mounted within said body (1) (See Figure 2);

a pair of pistons (4) within said body, said pair of pistons (4) attached to and extending from the shaft (9) (See Figure 2);

a combustion chamber (10) formed in said shaft (9) (See Figures 1-2);
wherein said body (1) has a centerline (Not Numbered) ; and said
shaft (9) extending along said body centerline (Not Numbered) (See Figure 2);
a pair of cylinders (5);
said pair of pistons (4) reciprocating within said pair of cylinders (5) (See
Figure 2);
a second combustion chamber (Not Numbered) formed between said pair
of cylinder (5) (See Figure 2);
an ellipsoid guide (25) in said body (1) (See Figure 2);
said pair of pistons (4) retained in said ellipsoid guide (25) (See Figure 2).

However, Savaltore fails to disclose piston faces having a depression to create
vortex.

Wolters teaches that it is conventional in the internal combustion engines art, to
utilize piston faces having a depression (12) to create vortex (See Figure 1, and Column
4, lines 29-49).

It would has been obvious to one having ordinary skill in the art at that time the
invention was made, to have utilized piston faces having a depression, as taught by
Wolters, to improve the performance efficiency of the Savaltore device.

***Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Savaltore et al. (Patent Number GB 2 020 739 A), in view of Wolters et al. (Patent
Number 5,878,712), and further in view of Aiti (Patent Number 3,766,900).***

The modified Savaltore device discloses the invention as recited above; however, fails to disclose a baffle on the piston face.

Aiti teaches that it is conventional in the internal combustion engines art, to utilize a baffle 9 on the piston face to direct exhaust gases to an exhaust outlet (See Figures 1-4).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a baffle on the piston face, as taught by Aiti, to improve the efficiency of the modified Savaltore device.

Allowable Subject Matter

Claims 5-8 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 1-5 and 6-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lacy (US Patent Number 4,986,226) discloses an internal combustion engine with an inner end of a piston having a curved depression 98.

- Baentsch (Patent Number DE 25 36 739 A) discloses a rotary internal combustion engine with reciprocating piston having scavenging depression in piston crown.
- Bohme (Patent Number DD 145122A) discloses a two stroke internal combustion engine.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

TTB
December 23, 2004

Thai-Ba Trieu
Patent Examiner
Art Unit 3748

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
December 23, 2004


Thai-Ba Trieu
Patent Examiner
Art Unit 3748